



Title

Method And Related Optical Disk Accessing Apparatus For Calibrating  
Optical Disk Tilt Servo System According To Non-Constant Relation  
Between Locations And Tilt Angles of Optical Disk

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Background of Invention

*This appl. Claims benefit of 60/461,548 4-10-03*

1. Field of the Invention

10 The present invention provides a method and related apparatus for  
calibrating a tilt servo system of an optical disk drive, and more  
particularly, a tilt servo system calibration method and related apparatus  
for surface bend according to a physical model showing that the optical disk  
has different degrees of radial tilt at different locations.

15 2. Description of the Prior Art

In modern information society, small, light, high-density, and  
low-cost optical disks have become one of the most popular non-volatile  
storage media. In order to access high-density optical data in an optical  
disk, the key development issue is how to improve precise operations of  
20 an optical disk storage device (such as optical disk drives and CD  
players).

Please refer to Fig.1 and Fig.2. Fig.1 illustrates a block diagram of a  
prior art optical disk drive 10, while Fig.2 is a lateral view diagram of  
25 the optical disk drive 10 along a sectioning-line 2-2. The optical disk  
drive 10 includes a control module 20, a tilt servo system 22, and related  
mechanical and electrical structures for data access, such as a motor 16,  
a track 14, a sled 12A, and a pick-up head 12B. The control module 20  
controls operation of the optical disk drive 10; the motor 16 rotates an  
30 optical disk 18. The sled 12A slides along the track 14. The pick-up  
head 12B set on the sled 12A emits a laser beam to the optical disk 18,  
and can access data at different locations on the optical disk 18.